

IN THE CLAIMS:

1. (Original) A sensor configured to determine a parameter of a flow of respiratory gas comprising:  
  
a temperature transducer, configured for positioning adjacent said flow of gas,  
  
a sensor housing configured to house said transducer and provide a substantial pathogen barrier to said flow of gas; and  
  
a conductive path between said transducer and said flow of gas.
2. (Original) A sensor according to claim 1 wherein said sensor housing has a locator to ensure said transducer is correctly positioned and/or aligned.
3. (Currently Amended) A sensor according to ~~any one of claims 1 or~~ claim 2 wherein said sensor housing is integrally moulded in a gases conduit for conveying said flow of gas.
4. (Currently Amended) A sensor according to ~~any one of claims 1 to 3~~ claim 2 wherein said conductive path has a thermally conductive probe.
5. (Currently Amended) A sensor according to ~~any of claims 1 to~~ claim 4 wherein said conductive path crosses said flow of gas.
6. (Currently Amended) A sensor according to ~~any one of claims 1 to~~ claim 4 wherein said conductive path is a band that said flow of gas flows within.

7. (Original) A sensor according to claim 3 wherein said sensor housing is combined with an engagement for an electrical connection.

8. (Original) A sensor according to claim 7 wherein said engagement for an electrical connection comprises an electrical contact adapted to energise a heater wire for heating said conduit or the interior thereof.

9. (Currently Amended) A sensor according to ~~any one of claims~~ claim 1 to 8 wherein said sensor housing means has longitudinal axis substantially perpendicular to said flow of gas.

10. (Original) A system for conveying a flow of respiratory gas comprising:

a conduit adapted to convey said flow of gases,

a thermally conductive member extending from the interior of said conduit in contact with said flow of gas to the exterior of said conduit, and

an external engagement for a temperature sensor engaging said member which does not protrude into said conduit.

11. (Original) A system for conveying a flow of respiratory gas according to claim 10 wherein said engagement for a temperature sensor is adapted to ensure intimate contact of said exterior portion of said thermally conductive member and a temperature sensor.

12. (Currently Amended) A system for conveying a flow of respiratory gas according to ~~claims~~ claim 10 ~~or 11~~ wherein said thermally conductive member comprises a thermally conductive housing.

13. (Currently Amended) A system for conveying a flow of respiratory gas according to ~~claims~~ claim 10 ~~or 11~~ wherein said thermally conductive member comprises a thermally conductive probe.

14. (Currently Amended) A system for conveying a flow of respiratory gases according to ~~claims~~ claim 10 ~~to 13~~ wherein said thermally conductive member comprises a conductive path that crosses the entire interior of said conduit.

15. (Currently Amended) A system for conveying a flow of respiratory gases according to ~~any one of claims~~ claim 10 ~~to 13~~ wherein said thermal conductive member comprises a conductive band within the circumference of said conduit.

16. (Currently Amended) A system for conveying a flow of respiratory gases according to ~~any one of claims~~ claim 10 ~~to 15~~ wherein said engagement for a temperature sensor is combined with an engagement for an electrical connection.

17. (Currently Amended) A system for conveying a flow of respiratory gases according to ~~any one of claims~~ claim 11 ~~to 16~~ further comprising a temperature sensor housed within a sensor housing.

18. (Original) A system for conveying a flow of respiratory gases according to claims 17 wherein said sensor housing is combined with an engagement for an electrical connection.

19. (Currently Amended) A system for conveying a flow of respiratory gases according to ~~claims 17 or~~ claim 18 wherein said sensor housing means has longitudinal axis substantially perpendicular to said flow of gases.

20. (Canceled)

21. (Canceled)